# Observation Services

## Vision

To develop and validate NWS observation service requirements. To articulate policy supporting the efficient use of NOAA and non-NOAA in-situ and remote environmental monitoring systems to support NOAA's Surface Weather Program.

## Concept of Operations

The program management of NOAA's Surface Weather Program resides in the OCWWS Observing Services Division (OSD). Additionally, the Observing Services Division provides program management, National direction and oversight to the Cooperative Observer (COOP) Network. OSD has the following goals

- ✓ Works with other NWS Divisions, Offices and NOAA Line Offices to provide policy and service requirements support for data management architectures to facilitate integration of disparate data sets for development of the U.S. Integrated Earth Observation System.
- ✓ Provides NWS service requirement oversight and policy support to NOAA's Environmental Real Time Observing Network (NERON) and coordinates activities that link NERON and COOP.
- ✓ Working within the NOAA Observing System Architecture, the Division ensures observation requirements for NWS Programs are documented.
- ✓ Ensures the Radiosonde Replacement System (RRS) Program Office meets observational service requirements.
- ✓ Develops policy that supports the efficient use of non-NOAA observing systems and serves as NWS liaison to the Office of the Federal Coordinator for Meteorology for federal observing service requirements and policy.


## Customer and Partner Requirements

With respect to restricted access to high quality data in real time at no cost or minimal recovery cost, facilitate access to NOAA and non-NOAA mesonet data, respecting any data use restrictions requested by non-NOAA partners.

## Link to Science and Technology Infusion Plan

The future for Observing Services policy and requirements support includes:

- ✓ Air Quality sensors
- ✓ Boundary layer profilers

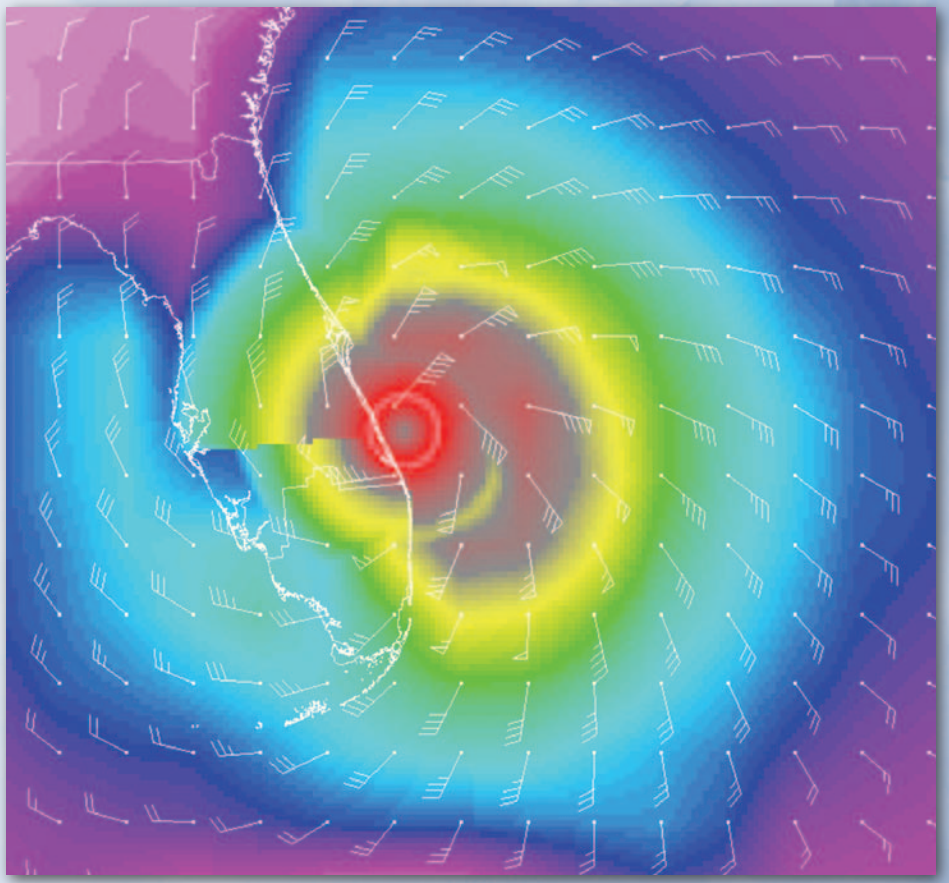
- ✓ Advancements in communications/dissemination
- ✓ Use of improved and more detailed aircraft meteorological reports
- ✓ Increased capability of satellite platforms
- ✓ Use of derived Global Positioning System (GPS) water vapor
- ✓ Use of improved GPS radiosonde data
- ✓ Use of Road Weather Information Systems, including rapid prototyping
- ✓ of a National Surface Weather Observing System

47

## Link to Science and Technology Requirements

Observing Services policy and requirements to support:

- ✓ Improved data assimilation via integration of observing systems
- ✓ Enhanced ocean and atmosphere model resolution and mesoscale physics
- ✓ Coupled mesoscale ocean and atmospheric models
- ✓ Improved high-resolution modeling at the land surface, including support for the surface transportation enterprise
- ✓ Collaborate with responsible offices on climate inter-comparison (data continuity) evaluations of observing system upgrades/replacements



*Gridded wind field around hurricane Frances, illustrating the large swath of tropical cyclone winds over the state of Florida.*

## Milestones by Quarter

### 1st Quarter

- Support deployment of four radiosonde replacement 'Operational Acceptance Test' systems.
- Establish transition team and charter for shift to operations of the Meteorological Assimilation Data Ingest System (MADIS: prototype National Surface Weather Observing Network).

- 
- Refine COOP Length of Service award process.
- Implement snow-paid observers.
- Implement snow measurement training videos for COOP observers.
- Develop five-year plan for COOP improvement.
- Implement 10 Fischer Porter upgraded rain gauges to support COOP improvement.
- Issue National COOP newsletter.
- Support national-scale Interactive Voice Remote Observation Collection (IV-ROCS)/ WeatherCoder operations/expansion.
- Support COOP website and database management.

*Climate Reference Network station in New England uses the same sensors as COOP modernization stations.*

### 2nd Quarter

- Assist RRS Program Office in developing inter-comparison (data continuity) evaluation plan for upper air climate purposes.
- Implement 10 Fischer Porter upgraded rain gauges to support COOP improvement.
- Take part in COOP program manager training.
- Develop transition to operations plan for MADIS.
- Support deployment of five RRSs.
- Support developmental research contribution for automated snowfall/snow depth sensors.
- Develop training materials on Fischer & Porter upgrade.
- Research operations study/cost analysis of automated snowfall/snow depth sensors.
- Replenish equipment/sensor spares, including evaporation sites and Operations and Maintenance (O&M).

### 3rd Quarter

- Review the status of on going Automated Surface Observing System (ASOS) sensor continuity evaluations and prepare a report in coordination with NOAA's National Climate Data Center (NCDC).
- Support deployment of six RRSs.
- Begin Fischer & Porter inter-comparison (data continuity) evaluation process with NWS Office of Operational Systems (OPS).

- Host Regional Cooperative Program Manager (RCPM)/Data Acquisition Program manager (DAPM)/Observing Program Leader (OPL) Workshop.
- Hold Metadata Policy/Requirements Workshop in collaboration with NCDC.
- Implement 10 Fischer Port upgraded rain gauges to support COOP improvement.
- Continue COOP Network Improvement Plan (begin network design/upgrade evaluation, performance assessment, closures).

**4th Quarter**

- Develop COOP metadata capacity (including imagery and Geographic Information System (GIS) applications) in the Management Information Retrieval System (MIRS).
- Support transition to operations of commissionable New England (or other) NERON stations.
- Develop electronic COOP forms capacity in MIRS.
- Begin Cooperative Station Service Accountability (CSSA) transition to MIRS.
- Implement 10 Fischer Port upgraded rain gauges to support COOP improvement.

## Looking Ahead to FY 2007

- ✓ Replenish/upgrade equipment sensors/spares and O&M
- ✓ Contract support for COOP database management, website and newsletter.
- ✓ Develop Initial Operating Capability for MADIS, (i.e., National Surface Weather Observing System supporting surface transportation).
- ✓ Continue COOP Network Improvement Plan (implement network design/continue evaluation, performance assessment, closures).
- ✓ Support Snow Paid Program.
- ✓ Support Data Acquisition Course.
- ✓ Support RCPM/DAPM/OPL Workshop.
- ✓ Complete Fischer Porter rain gauge upgrade.
- ✓ Complete CSSA transition to MIRS.
- ✓ Complete COOP metadata capacity (including imagery, GIS applications) in MIRS.
- ✓ Complete developmental research/produce operational prototype of automated snowfall/snow depth sensor.
- ✓ Prototype field evaluation of automated snowfall/ snow depth sensors.
- ✓ Support IV-ROCS/WeatherCoder national improvements.
- ✓ Move to operations any New England/other NERON sites meeting commissioning/COOP criteria.

## Contact Information

Mike CampbellChief, NWS Observing Services Division, NOAA Surface Weather Program Manager
301/713-0154, ext. 110, or mike.campbell@noaa.gov.